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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,945	10/12/2001	Pascal Pineau	1296-01	1749

35811 7590 03/18/2004

IP DEPARTMENT OF PIPER RUDNICK LLP
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EXAMINER

DASTOURI, MEHRDAD

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 03/18/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,945

Applicant(s)

PINEAU, PASCAL

Examiner

Mehrdad Dastouri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 29, 2003 has been entered.

Response to Amendment

2. Applicant's amendment filed October 21, 2003 has been entered and made of record.
3. 35 U.S.C. § 112 rejection of Claim 2 has been withdrawn in view of Applicant's amendment.
4. Objection of Claim 2 has been withdrawn in view of Applicant's amendment.
5. Applicant's arguments have been fully considered but are moot in view of the new grounds of rejection. It should be noted that the broad limitation of "portions of" digital image includes the entire digital image as well.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1 recites the limitation "said subject" in Line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collet-Billon, U.S. 5,540,229 and Williams, U.S. 6,241,673.

As per Claim 1, Collet-Billon teaches:

an acquisition workstation (Figure 3, Component 31) comprising:

means for acquiring an echographic image (Figure 3, Component 33) and generating a digital image formed by a three-dimensional matrix from echographic sectional planes of said echographic image (Figure 3, Component 39, Column 4, Lines 54-56, Column 5, Lines 33-35);

means for transmitting portions of said digital image to a diagnostic workstation (Figure 3, Component 34) in response to manipulation of a probe disposed at the diagnostic workstation (Column 4, Lines 56-58, Column 5, Lines 39-40; Figure 3, Bus 43; Column 7, Lines 3-25), said diagnostic workstation disposed remotely from said subject (As best understood by the Examiner, workstation 34 is disposed remotely from Dummy 56);

said diagnostic workstation (Figure 3, Component 34) comprising:

a probe (Figure 3, Component 58) and means for referencing positions on a dummy (Column 7, Lines 20-25 or 28-33);

echographic display means connected to the means for referencing positions (Figure 3, Display 36);

means for performing a virtual echographic examination (Column 7, Lines 25-30) of said digital image with said probe to select any two-dimensional sectional plan from said digital image (Column 5, Lines 53-58, Column 6, Lines 1-12, 53-58, Column 7, Lines 57-64, Column 8, Lines 5-10);

Collet-Billon further discloses (based on a broad reasonable interpretation) means for expert assessment (Column 5, Lines 17-64), and means for transmitting control data between said acquisition workstation and said diagnostic workstation, said control data allowing a user to select, on each workstation, a sectional plan to be visualized (Figure 3, connections between acquisition workstation 31 and diagnostic workstation 34; Column 5, Lines 17-64. The teachings of Collet-Billon, at least, include transfer of visual contents between the acquisition workstation and the diagnostic workstation).

Collet-Billon does not explicitly teach permitting the transfer of audio and visual contents between said acquisition workstation and said diagnostic workstation.

Williams teaches transmitting two-dimensional ultrasonic imagery to a remote location including transfer of audio and visual contents between an acquisition workstation and a diagnostic workstation (Figures 2 and 3; Abstract; Column 2, Lines 32-67). Williams further (in the narrowest possible interpretation of the claim language) goes on to teach:

means for transmitting, in addition to the audio and visual data, the control data between the acquisition workstation and the diagnostic workstation, said control data (Column 2, Lines 32-67) allowing the user to select, on each workstation, a sectional plan to be visualized and subsequent diagnosis being implemented (Column 3, Lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the three dimensional image processing capabilities of Collet-Billon in the image diagnostic in accordance with the teachings of Williams concerning the capability of remote audio-visual communication of diagnostic medical echographic information because it will provide rural community and smaller hospitals access to the services of full-time professional and to be able to conduct such examinations with the remote site viewing, interpreting and controlling the examination. Such a system allows the patient to sit for one examination and allows for the possibility of performing alternative procedures, if required.

As per Claim 2, Collet-Billon teaches:

means for acquisition of a three-dimensional image (Figure 3, Component 33);

means for processing said three-dimensional image (Figure 3, Component 35) in the system according to Claim 1 (see rejection of Claim 1 above),

However, Collet-Billon does not teach the following, but Williams teaches:

wherein said workstation comprises:

means for communicating with said diagnostic workstation to display at the same time on the screen of said diagnostic workstation and on the display of said workstation

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sectional planes selected by the expert performing in real time a virtual echographic probe from the three-dimensional matrix available on the acquisition and diagnostic workstation, said transmitting from one workstation to another station only said control data allowing for selection of the sectional plan to be visualized (Figures 2 and 3; Column 3, Lines 1-67, Column 4, Lines 1-37); and

means for recording said control data and again performing an examination (Column 2, Lines 32-67; Column 3, Lines 59-67, Column 4, Lines 1-5).

As per Claim 3, Collet-Billon teaches:

a central unit (Figure 1, central processing unit),

a display screen (Figure 1, element 6),

a high-definition digitalization card enabling acquisition of an echograph video signal (a central card 11, Column 4, Line 52; Column 6, Lines 66-67),

a three-dimensional position sensor giving spatial positions of the echographic probe (Column 6, Lines 10-14),

With regards to further limitations of Claims 3, arguments analogous to those presented for Claim 2 are applicable to Claims 3 and 8. The capability of transmitting audio-visual ultrasound data disclosed by Williams for diagnosis purposes is interpreted as videoconferencing means. The system disclosed by Williams, as depicted in Figures 2 and 3, includes means for connecting to a communication network and an echograph, and means for storing data acquired from the echograph (Column 2, Lines 32-50; Column 3, Lines 1-67, Column 4, Lines 1-37). The capability of videoconferencing between experts will be clearly understood by considering the interactive audio-visual

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communication of ultrasound information (Column 2, Lines 32-50). Color camera, microphone and headset are conventional equipments routinely utilized in videoconferencing which are well known in the art.

As per Claim 4, Collet-Billon teaches:

performance of a virtual echographic examination (display of sectional planes from a three-dimensional matrix) (Column 2, Lines 8-12, 60-63). **NOTE:** The examiner in interpreting the parenthetical to be the definition of the virtual echographic examination.

But Collet-Billon does not teach the transmission of the examination data.

However, Williams teaches:

the system of Claim 1 adapted to receive a file (results of exam) for expert assessment (Column 3, Lines 1-67, Column 4, Lines 1-5),

transmission of an electronic report (Column 2, Lines 32-50) and hosting a session of receiving expert assessment combining videoconference and remote manipulation (Figures 2 and 3; Column 3, Lines 1-67, Column 4, Lines 1-5) of the three-dimensional (Collet-Billon teaches the 3D data, Column 2, Lines 55-60, Column 5, Lines 40-44) data.

As per Claim 5, it recites substantially the same limitations as Claim 3 above and analogous remarks apply, except for the following limitations:

a color camera (well know in the videoconferencing art)

color ink-jet printer (apparent to one of ordinary skill in the art that a color ink-jet printer can be connected to a workstation Collet-Billon, figure 3, element 34. Williams invention, Figure 2, Component 260) or PC (Collet-Billon, Figure 1, Element 4).

As per Claim 7, Collet-Billon teaches:

means for acquisition of a three-dimensional image (3D probe, Figure 3, Element 33);

means for processing said three-dimensional image in a system according to Claim 1 (see rejection of Claim 1); and

means for linking multiple physical devices (VME bus, Column 4, Lines 56-60).

With regards to Claim 8, arguments analogous to those presented for Claims 2 and 3 are applicable to Claim 8.

Other Prior Arts Cited

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,964,709 to Chiang et al.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehrdad Dastouri whose telephone number is (703) 305-2438. The examiner can normally be reached on Monday to Friday from 8:00 a.m. to 4:30 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEHRDAD DASTOURI
PRIMARY EXAMINER

Mehrdad Dastouri

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Primary Examiner
Art Unit 2623
March 14, 2004